Request for Information (RFI)

By the
State of Tennessee
Department of Finance and Administration

RFI Number: 317.03-147

A. Statement of Intent:

The State of Tennessee (State), Department of Finance and Administration, Office for Information Resources (OIR), Tennessee Board of Regents (TBR), and the University of Tennessee (UT), issues this Request for Information (RFI) for the purpose of obtaining information to help State leadership determine the feasibility of lighting a fiber backbone infrastructure. Prospective vendors are strongly encouraged to respond to this RFI. The information received in response to this RFI will help determine the direction of any future Request for Proposal (RFP) for the Tennessee Information Infrastructure 2 (TNII-2) hardware, implementation and management services although there is no guarantee an RFP will ever be developed as a result of this RFI. Respondent information will also be used to document the business case and funding requirements for fiber ownership.

B. Background

Across America, states are making strategic investments in essential technology infrastructure as the information technology revolution continues to redefine competition in research, education, government services, and business in a global economy. The state's existing TNII contract for the State's Wide Area Network expires April 2007. The present K12 contract providing service to Tennessee's schools expires June 2007. Higher Education's recent Cyberinfrastructure Commission report finds a need for an innovative state-of-the-art infrastructure on which to build research and collaboration between institutions. Vehicles on which to build economic development though the extension of modern network and data services need improvement statewide. Government and education require a reliable, secure infrastructure to function and provide services to the citizens of the State of Tennessee.

The exact form of service to meet Tennessee's needs in the future has not been determined. Our requirements analysis and interface with industry will help shape the approach to continued and improved service.

C. General Instructions:

C.1. SUPPORT SERVICES AND INTEGRATED SOLUTIONS

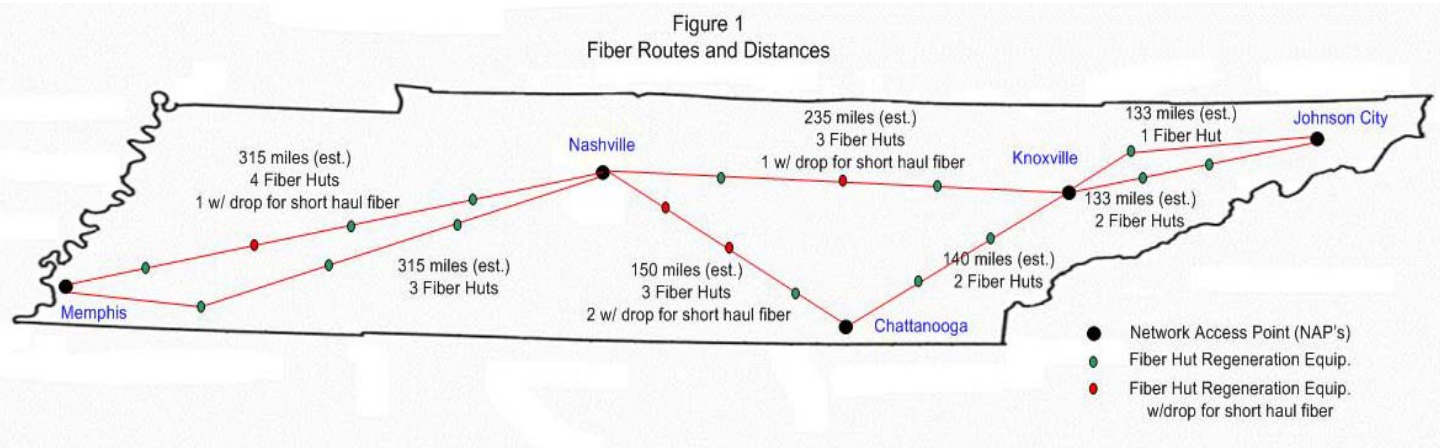
The State's primary intention in issuing this RFI is to gain insight into the potential purchase and maintenance costs associated with fiber multiplexer and regeneration equipment to light a dark fiber infrastructure.

The State may be interested in a strong partnership with a provider that could provide possible installation and provisioning of equipment and remote hands support as part of an eventual contract. The benefits of such an arrangement will be weighed against the flexibility and cost effectiveness of installing and maintaining equipment.

C.2. GENERAL OVERVIEW OF FIBER MUX REQUIREMENTS

The State may install a 10 Gbps DWDM network on dark fiber as illustrated in Figure 1. Initially, the equipment will be provisioned to light two lambdas that will transmit at 10 Gbps over the dark fiber between every NAP (Network Access Point). In addition to the connectivity to the long-haul fiber, there will be three other hand-off connections at each NAP. One 10Gbps circuit on the long-haul fiber will be utilized by higher education and will require a 10Gbps hand-off to a circuit running to their institutions. The second 10Gbps. circuit will require two OC-48 hand-offs. One will connect to a carrier who is awarded the contract to replace the TNII WAN network. The other OC-48 will connect to a carrier serving the K-12 WAN network. In addition to the equipment required at the NAPs, all other equipment necessary to complete the transmission of the signal such as regeneration over a long-haul network must also be included. Diagram 1 includes an estimated total distance between NAPs an indication of the number of fiber huts along each segment. Locations along the fiber route that are marked in red will include equipment needed to interface with a short haul fiber run to an additional location.

Figure 1
Fiber Routes and Distances



Installation and ongoing costs such as yearly maintenance and any other operational expenses is to be included in the pricing document.

In engineering the equipment solution for the State, respondents shall provide a solution that allows for additional lambdas to be lit in the most cost effective manner possible. This means the equipment should be expandable and flexible to accommodate additional modules to allow for both the lighting of the lambdas on the long-haul fiber as well as other interconnectivity of local optical or leased circuits. Indicate the appropriate one-time and on-going cost for bringing up additional lambdas in Pricing Table 2, Appendix A.

C.3. INSTALLATION

Racks will be provided to you for the installation of the fiber mux equipment. These will be located at the NAP and fiber huts along with necessary power requirements. The following power requirements have been requested from the dark fiber vendors:

Collocation Racks or Cages must provide the following power at each rack:

- Conditioned, uninterruptible power for 24 hours in the event of a commercial power failure.

- 48V DC dual power feeds of 10 Amps each (with the ability to purchase more in

10 Amp increments) for running line sites.

- 48V DC dual power feeds of 60 Amps each for any primary State site where equipment will be located.

- Convenience power outlets of 120 V AC within 8 feet from rack.

If the equipment being quoted has different power requirements than what is listed above, state the requirements as part of the response. Also provide a list of environmental requirements needed to maintain warranties. Also list any other additional requirments.

C.4. MAINTENANCE

The State is requesting information as part of this RFI for a maintenance contract covering 7 days a week by 24 hours a day (7 x 24). Maintenance shall include a two-hour response time to any major or critical situation and a four-hour response time to any minor reported condition. All hardware and software break/fix maintenance support shall be included. List any additional maintenance options indicating response times associated with the maintenance plan.

C.5. MANAGEMENT

The equipment shall be configured for remote access support and alarm monitoring. State the required interfaces for this level of support access. Include as part of the response, whether subcontracted or otherwise, a level of management service which proactively monitors the equipment and in the event of an alarm condition, management party shall notify the State and any vendors necessary for resolution. It will be the responsibility of the responding party to this RFI, to maintain a network operations center for these purposes. This includes contacting dark fiber vendors, scheduling repairs and following through to complete resolution. Additionally, any anticipated scheduled maintenance shall also be included such as potential software upgrades, cleaning filters and any other proactive maintenance necessary.

C.6. Questions Regarding this RFI:

Please feel free to contact the Department of Contact of finance and Administration with any questions regarding this RFI. All questions shall be in writing through email as the responses may be provided to all potential responders.
The main contact will be:

Vickie Stanfill
TNII Executive Director
Department of Finance and Administration
15th Floor Tennessee Tower
312 8th Avenue, North
Nashville, TN 37243-0288
Phone 615.253.5529
Fax 615.253.1433
Vickie.Stanfill@state.tn.us

D. Instructions For Responding:

Submit your Request for Information response including Appendix A, Pricing Document, via email by March 23, 2006 with reference Request for Information # 317.03-147 to:

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TNII Executive Director
Department of Finance and Administration
15th Floor Tennessee Tower
312 8th Avenue, North
Nashville, TN 37243-0288
Phone 615.253.5529
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Appendix A
Pricing Document
RFI: # 317.03-147

Insert the pricing for the fiber mux equipment. Please provide detail pricing for all equipment in a separate spreadsheet. Also, provide a list of maintenance contract options indicating response times.

Pricing Table 1

Location	Fiber Mux Equipment	Installation	Annual Maintenance 7 x 24 x 2	Annual Management Contract	Additional Charges (Explain Below)
Memphis (NAP)	$	$	$	$	$
Nashville (NAP)	$	$	$	$	$
Chattanooga (NAP)	$	$	$	$	$
Knoxville (NAP)	$	$	$	$	$
Johnson City (NAP)	$	$	$	$	$
13 Fiber Huts Regeneration Equipment	$	$	$	$	$
4 Fiber Huts Regeneration Equipment w/drop-off capability	$	$	$	$	$
Totals	$	$	$	$	$

Explanations for any additional charges indicated in the last column:

List in the table below pricing associated with lighting one additional 10Gbps. lambda on a given segment with drop-off at each of the two endpoint NAPs. This would be a later addition to an existing network.

Pricing Table 2

Location	Fiber Mux Equipment	Installation	Annual Maintenance 7 x 24 x 2	Annual Management Contract	Additional Charges (Explain Below)
Per segment (Two NAPs)	$	$	$	$	$

Explanations for any additional charges indicated in the last column: